

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for increasing column lifetime for a HPLC column packed with a superficially porous silica-based reversed-phase support, the method comprising:

eluting ~~[[a]]~~the HPLC column, which is packed with a superficially porous silica-based~~[[,]]~~ reversed-phase support and loaded with a sample mixture comprising at least two components, with an aqueous mobile phase comprising ~~less than~~ between 0.5 and 10% by volume of at least one neutral, polar, fluorinated organic compound; wherein the presence of the neutral, polar, fluorinated organic compound in the aqueous mobile phase leads to an increased column lifetime, as compared with the lifetime observed in the absence of the neutral, polar, fluorinated organic compound, all other conditions being equal.

2. (Currently Amended) The method of claim 1, wherein the presence of the neutral, polar, fluorinated organic compound in the mobile phase leads to a higher retention of at least one component of the sample mixture as compared with the retention observed for the same component of the sample mixture in the absence of the neutral, polar, fluorinated organic compound, all other conditions being equal.

3. (Currently Amended) A method according to claim 1 or 2, further comprising detecting at least one of the components of the sample mixture as it elutes from the column as a solution in the mobile phase.

4. (Currently Amended) A method according to claim 3, wherein the method is a method for analysis of at least one component of the sample mixture.

5. (Currently Amended) A method according to claim 1 or 2, further comprising collecting at least one component of the sample mixture in a distinct fraction as it emerges from the column as a solution in the mobile phase.

6. (Currently Amended) A method according to claim 4, wherein the method is a method for preparative isolation of at least one component of the sample mixture.

7. (Cancelled)

8. (Currently Amended) A method according to claim 1, wherein the neutral, polar, fluorinated organic-modifier compound is a polyfluorinated alcohol.

9. (Original) A method according to claim 8, wherein the polyfluorinated alcohol is selected from the group consisting of 2,2,2-trifluoroethanol; 1,1,1,3,3,3-hexafluoroisopropanol; and combinations thereof.

10. (Original) A method according to claim 1 or 2, wherein the mobile phase has a pH between 2 and 11.

11. (Original) A method according to claim 1 or 2, wherein the mobile phase has a pH between 6 and 8.

12. (Original) A method according to claim 1 or 2, wherein the mobile phase further comprises a modifier selected from the group consisting of a buffering agent, an ion-pairing agent, a multivalent cation binding agent, a surfactant, a water-soluble organic solvent, and combinations thereof.

13. (Original) A method according to claim 1 or 2, wherein the HPLC column is run using an isocratic elution.

14. (Original) A method according to claim 1 or 2, wherein the HPLC column is run using a gradient elution.

15. (Cancelled)

16. (Original) A method according to claim 1 or 2, wherein the components of the mixture are polynucleotides.

17-18. (Cancelled)

19. (Currently amended) A method for improving resolution of sample mixture components by increasing retention of at least one component of a sample mixture comprising at least two components, the method comprising:

eluting a HPLC column, which is packed with a superficially porous silica-based reversed-phase support and loaded with a sample mixture comprising at least two components, with an aqueous mobile phase comprising:

~~an ion pairing agent; and~~

~~less than between 0.5 to 10% by volume of an additive comprising at least one neutral, polar, fluorinated organic compound[.]; and~~

wherein the presence of the neutral, polar, fluorinated organic compound in the aqueous mobile phase leads to a higher retention of at least one component of the mixture as compared with the retention observed for the same component of the mixture in the absence of the neutral, polar, fluorinated organic compound, all other conditions being equal.

20. (Previously Presented) The method of claim 19, wherein the presence of the neutral, polar, fluorinated organic compound in the mobile phase leads to an increased column lifetime, as compared with the lifetime observed in the absence of the neutral, polar, fluorinated organic compound, all conditions being equal.

21. (Cancelled)

22. (Previously Presented) A method according to claim 19, wherein the fluorinated organic modifier is a polyfluorinated alcohol.

23. (Previously Presented) A method according to claim 22, wherein the polyfluorinated alcohol is selected from the group consisting of 2,2,2-trifluoroethanol; 1,1,1,3,3,3-hexafluoroisopropanol; and combinations thereof.

24. (Previously Presented) A method according to claim 19, wherein the components of the mixture are polynucleotides.
25. (New) A method according to claim 19, wherein the mobile phase additionally comprises an ion-pairing agent.
26. (New) A method according to claim 19, wherein the elution of the HPLC column is performed at a temperature between 50°C and 90°C.
27. (New) A method according to claim 19, wherein the superficially porous silica-based reversed-phase support is derivatized with C4, C8, C18, phenyl or cyano moieties.
28. (New) A method according to claim 1, wherein the mobile phase additionally comprises an ion-pairing agent.
29. (New) A method according to claim 1, wherein the elution of the HPLC column is performed at a temperature between 50°C and 90°C.
30. (New) A method according to claim 1, wherein the superficially porous silica-based reversed-phase support is derivatized with C4, C8, C18, phenyl or cyano moieties.
31. (New) A method according to claim 8, wherein aqueous mobile phase comprises between 0.5 and 2% by volume of a polyfluorinated alcohol.